



## Resolution of taxonomic problems associated with the complex publication history of the seminal Torre and Bartsch monograph on Cuban Urocoptidae (Gastropoda, Pulmonata)

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### Abstract

This paper clarifies the confusion relating to the publication of Carlos de la Torre & Paul Bartsch's taxonomic study of the Cuban Urocoptidae. This massive work, which described >500 new taxa, was completed in manuscript form in 1943, but was not published during the authors' lifetime. In 1972 Miguel Jaume and Alfredo de la Torre (a nephew of C. de la Torre) published a slightly modified version of a large portion of this manuscript in the *Circulares del Museo y Biblioteca de Zoología de la Habana*, a mimeographed journal which is available for taxonomic purposes per ICZN Code Article 8. The 420 new taxa introduced in this paper were made available under the ICZN Code (even though many were differentiated only in identification keys) and should be attributed to C. de la Torre & Bartsch because the descriptions were copied from the 1943 manuscript and Jaume & A. de la Torre explicitly credited this work to the former two authors (per Article 50 of the 1964 edition of the ICZN Code). The 1972 paper does not delineate type material for most of the new species-group taxa; however the detailed information provided in the 1943 manuscript constitutes valid evidence of the type series per ICZN Code (1999) Article 72.2. The 1972 paper was republished by Jaume & A. de la Torre in 1976 in the *Ciencias Biológicas* of the Universidad de la Habana. In 1980 Jaume & A. de la Torre prepared a typescript describing the remaining new taxa from the 1943 manuscript, which was slated to be published in the *Circulares*; however we have not found any evidence that it was distributed or otherwise made available in a manner satisfying the ICZN Code criteria for availability. In 2008 Carolina de la Torre, grand-niece of C. de la Torre, published the entire 1943 manuscript in a book of more than 760 pages that was printed in Havana. The authorship of this book was credited to C. de la Torre & Bartsch. The book describes as new the taxa already treated in the 1972 paper as well as 130 additional taxa, which also should be attributed to C. de la Torre & Bartsch. We briefly discuss the disposition of the Cuban urocoptid material studied by C. de la Torre & Bartsch and the subsequent citations to their taxonomic study of this fauna.

**Key words:** Urocoptoidea, land snails, Caribbean, biodiversity, taxonomy, nomenclature

### Introduction

The Urocoptidae, a family of terrestrial pulmonate gastropods belonging to the Urocoptoidea (formerly in the Orthalicoidae), is distributed in tropical and sub-tropical regions of North America, Central America, and the islands of the Caribbean (Boss 1982: 1074; Schileyko 1999: 368–429; González-Guillén 2008; Uit de Weerd 2008). Urocoptids are primarily or exclusively calciphilic (restricted to limestone and other calcareous substrates) and consequently are distributed in an insular fashion, with populations spatially separated by patches of non-calcareous substrates. The resulting propensity for local differentiation is evidenced by the large number of species that have been described in this family. One of the “hotspots” of urocoptid diversity is the island of Cuba (Espinosa & Ortea 2009), whose fauna was extensively documented by two well known malacologists, Carlos de la Torre and

Paul Bartsch. Here we attempt to clarify some of the confusion that has surrounded the publication of these taxonomic studies.

The Torre & Bartsch Cuban Urocoptidae manuscript (1943).

Carlos de la Torre (1858–1950), longtime curator of mollusks at the Museo “Felipe Poey,” University of Havana (Cuba); and Paul Bartsch (1871–1960), longtime curator of mollusks at the U.S. National Museum, Smithsonian Institution, collaborated on monographic treatments of several family-level groups of terrestrial gastropods from Cuba (e.g., C. de la Torre & Bartsch 1938, 1941). Torre made a number of visits to the Smithsonian Institution in the 1930’s and the early 1940’s (while exiled from Cuba), and Bartsch made reciprocal visits to Havana during that same time period (Rehder 1997: 119). Alfredo de la Torre (1917–2002), a nephew of Carlos de la Torre, also visited the Smithsonian in 1941, while his uncle was researching the Cuban urocoptids with Bartsch (Rehder 1997: 119; Jiménez Vásquez 2003: 30), to study urocoptid radulae with curator Joseph P. E. Morrison.

The Torre and Bartsch monographs of several other gastropod families, which the Smithsonian published, contained descriptions of many new taxa at all taxonomic ranks, based largely or entirely on conchological characters. However, one of their largest manuscripts, “The Terrestrial Mollusks of the Family Urocoptidae in the Island of Cuba,” which was completed in 1943, was never published in their lifetimes. Two copies of the manuscript survived their deaths—one that is now in the Smithsonian Institution Archives (Record Unit 7089, Series 6, Boxes 5, 6, and 7), and one that remained with Torre’s family (Torre-Callejas & González-Guillén 1997: 35; González López 2009: 46). Both copies are the original, typed version of the manuscript. Based on the surrounding circumstances, it appears that Bartsch was primarily responsible for the text of this manuscript, although as discussed below, both C. de la Torre and Bartsch should be credited with co-authorship of the new taxa described therein.

During the 1950’s and 1960’s other authors published short papers describing several new species of Urocoptidae from Cuba (e.g., Clench 1966; Clench 1967), which led to a renewed interest by Cuban malacologists in the Torre & Bartsch manuscript. The political changes that occurred in Cuba during that time period made it difficult for Cuban malacologists to correspond with their American counterparts, or to conduct research in their own country. Miguel Jaime (1905–1990), a malacologist who continued his research while serving as head of the Museo Natural de Historia Natural “Felipe Poey” at the Academia de Ciencias de Cuba (built in 1929) (Perera 1994), wrote to Harald Rehder, then-Curator of Mollusks at the Smithsonian, to complain about the problems in studying and curating the Cuban Urocoptidae:

As you will readily understand, it is very difficult to work in our local faunas because in every place you have trouble by the presence of new species in the family Urocoptidae. As you know, about 20 years elapsed since the paper by Dr. de la Torre and Bartsch was finished, but not published [*sic*] by your Institution. I am now writing to you to kindly request the possibility that we make the publication of said paper, sending us the manuscript and photos. We are ready to have the paper published shortly. This is very important for our work. On the other hand some species of that family new to science have since been published by Sanchez Roig and recently Dr. Clench has done the same... (M. Jaime letter to H. A. Rehder, June 11, 1968).

It does not appear that Rehder provided the Smithsonian’s copy of the manuscript to Jaime.

“Los Urocoptidae de Cuba” (1972)

Jaime subsequently accessed the Cuban copy of the Torre and Bartsch manuscript through A. de la Torre. In 1972, they published “Los Urocoptidae de Cuba (Mollusca—Pulmonata),” which was printed in mimeographed form in eight parts in the *Circulares del Museo y Biblioteca de Zoología de la Habana* (C. de la Torre & Bartsch 1972a–h). One of us (AGG), who knew A. de la Torre, understood that Jaime did not show the 1972 papers to A. de la Torre before they were published. Despite its impressive title, the *Circulares* appears to have been self-edited by Jaime, who contributed most, if not all, of the articles. The two-page introduction to this publication was written in Spanish, and discussed the problems that Cuban malacologists had in studying the Urocoptidae, given that the Torre & Bartsch manuscript had not been published (Jaime & A. de la Torre in C. de la Torre & Bartsch 1972a: 1526–1527). The rest of the 1972 publication—which totaled 124 pages—was written almost entirely in English (with some headers, remarks, and abbreviations in Spanish), and treated four subfamilies, three stated to be new (Brachypodellinae, Johaniceraminae, Tetrentodoninae, Urocoptinae). The 1972 work ends with a section on the new subfamily Johaniceraminae. Page 1649 ends with the bilingual note, “(Continuará) (To be continued).” Parts 1

to 7 were printed in single-space text, on both sides of the sheets; in contrast, Part 8 was printed on different paper stock, with part of the text double-spaced, and printed on a single side of each sheet.

A comparison of the 1972 work with the Torre & Bartsch manuscript (in the Smithsonian archives) indicates that Jaume & A. de la Torre copied from the latter, more or less *verbatim*, (1) the identification keys to the subfamilies, genera, and species; (2) short descriptions (beyond what was provided in the identification keys) of the subfamilies, genera, and some of the new species; (3) some of the localities for the new species. Type localities and type specimens were specified for only two of the new species. For a relatively small number of taxa, Jaume & A. de la Torre provided additional localities not mentioned in the manuscript, or referenced subsequent publications on the Urocoptidae by other authors. For example, the synonymy of *Pleurostemma perplicata* (Beck, 1837) cited a 1966 paper by Clench (Jaume & A. de la Torre *in* C. de la Torre & Bartsch 1972h: 1646).

The 1972 publication did not include any of the photographic illustrations of the new species that accompanied the 1943 manuscript; note that the mimeographed *Circulares* did not have illustrations for any of its articles. The introductory section of the first of these papers explicitly credited C. de la Torre & Bartsch for the new taxa described therein:

“...y nuestra colaboración continúa con nuestros queridos Maestros Carlos de la Torre y Paul Bartsch, nos hemos decidido a dar a conocer esa fauna tan maravillosa, advirtiéndole que hemos seguido rigurosamente la clasificación de dichos especialistas, a quienes se debe dar el consiguiente crédito. Solamente introduciremos las modificaciones pertinentes ocasionadas por los nuevos trabajos anteriormente señalados, adaptando las claves y los nombres nuevos propuestos en los mismos. (C. de la Torre & Bartsch 1972a:1527).

Our translation of this text follows:

...and our collaboration continues with our dear Professors Carlos de la Torre and Paul Bartsch, we have decided to introduce this marvelous fauna, pointing out that we have rigorously followed the classification of the aforementioned specialists [Torre and Bartsch], who ought to be given consequent credit. We only introduce pertinent modifications occasioned by the new works mentioned previously, adapting the keys and new names proposed by the same [i.e., Torre & Bartsch]

However the text did not indicate the authorship of any of the new taxa, leading subsequent authors to attribute these novelties to “Jaume & A. de la Torre.”

#### “Los Urocoptidae de Cuba” (1976)

In 1976 Jaume & A. de la Torre republished the 1972 articles in the *Ciencias Biológicas* of the Universidad de la Habana (C. de la Torre & Bartsch 1976). The 1976 publication was re-typeset from the 1972 work, but did not contain any indication of the original (1972) pagination other than a footnote on the first page stating that this work was first published in the *Circulares*, pages 1526–1649. The only difference in the contents of the 1972 and 1976 publications is that the 1976 publication included a bilingual abstract by Jaume & A. de la Torre stating that this work encompassed three new subfamilies, 36 new genera, and 365 new species and subspecies (Jaume & A. de la Torre *in* C. de la Torre & Bartsch 1976: 3). As before, no illustrations were included, and the 1976 paper also ends with the section on the Johaniceraminae, with the same note as at the end of the 1972 series, “(Continuará) (To be continued).” Jaume & A. de la Torre presumably republished the 1972 work in the *Ciencias Biológicas* because this journal had a wider distribution and was printed on better quality paper than the *Circulares*.

#### The Cuban Macroceraminae and Microceraminae (1980)

In 1980, after a hiatus of several years, Jaume & A. de la Torre intended to resume their re-publication of the C. de la Torre & Bartsch manuscript and treat the last two subfamilies (Macroceraminae and Microceraminae). Their 27-page 1980 typescript was stated to be published in the *Circulares del Museo y Biblioteca de Zoología*, but there is no evidence that this article was actually distributed or otherwise made available outside of the Museo y Biblioteca de Zoología. No copies are known to be extant in the U.S. libraries that have the 1972 articles, nor in malacological reprint collections. Some Cuban malacologists had heard from others that Jaume said he had sent a

copy to the British Museum (Natural History) so that it could be recorded in the *Zoological Record* (José Espinosa Sáez email to RH, 20 December 2011); however that journal never indexed the 1980 article, and the Zoology Library of the Natural History Museum, including the Mollusca Section, does not have this article. An electronic version of the 1980 typescript (which did not record the original page breaks) was subsequently prepared by a Cuban malacologist in the first decade of this century and circulated to several other researchers, who evidently referred to it during the course of their own research, as discussed below.

In 1997, A. de la Torre expressed regret as to how his co-author, Jaume, had published part of the C. de la Torre & Bartsch manuscript. In a short note, he recounted that, “But on the heading page of this publication, which appeared in 1972 and was reproduced again in 1976, Dr. Jaume did not write the name of Carlos de la Torre and Paul Bartsch as had been suggested to him by the [senior] author of this note” (Torre-Callejas & González-Guillén 1997: 35).

Alfredo de la Torre and one of us (AGG) also wrote in 1997 that “we hope to get the [second part<sup>1</sup>] published [of] this work in the near future”, and stated that the 1972 taxa should not be considered as *nomina nuda*, since “such action [would result in] the enormous and avoidable task of rejecting the many names that represent the work of two prominent and respected scientists during their work of many years and also unnecessarily increase the number of nomenclatural names” (Torre-Callejas & González-Guillén 1997: 35). As seen in the next section, the rest of the manuscript was indeed published in 2008, albeit in a manner that created additional nomenclatural problems.

#### “Los moluscos terrestres cubanos de la familia Urocoptidae (2008)

The Cuban copy of the C. de la Torre & Bartsch manuscript was found by one of us (AGG) among A. de la Torre’s possessions after his death in 2002 and given to his daughter, Carolina, grand-niece of C. de la Torre. In 2008, on the 150th anniversary of the birth of C. de la Torre, Carolina de la Torre published the entire manuscript in a book of over 760 pages that was printed in Havana. The authorship of the book was credited solely to C. de la Torre & Bartsch. Carolina de la Torre, in an editorial preface, mentioned that part of the manuscript had been published by Jaume & A. de la Torre in 1972, 1976, and 1980, but she did not discuss the fact that many of the “new” taxa in the 2008 book had already been described. (Carolina de la Torre, *in* C. de la Torre & Bartsch 2008: ix–x). Although one of us (AGG) initially suggested that the entire manuscript should only be published after reviewing both the Smithsonian’s copy of the manuscript and the museum collections of Urocoptidae and also attempted to ensure that the book would more clearly detail the authorship and dates of publication of the taxa treated in the book, the editor (Carolina de la Torre) and the three malacologists who assisted her (Steffen Franke, Alina Lomba, and Alejandro Fernández Velasquez) did not do so. As shown in the next section, the publication of the 2008 book did not fully comply with the ICZN Code (1999) or with generally accepted practices of modern systematic biology.

The text of this book is in English (as was the 1943 manuscript); the introductory sections and some commentaries are in Spanish. The 2008 book provided full-length descriptions (copied from the 1943 manuscript), including illustrations and specification of the type specimen(s), for the new species that the 1972 papers had only treated in the identification keys. However, it appears that the Cuban manuscript volumes were missing the illustrations for at least two of the subfamilies (Microceraminae and Macroceraminae), since the new species in those subfamilies are not illustrated at all in the 2008 book. These illustrations are in the Smithsonian Archives. The descriptions of some of these species are also incomplete in other respects.

Finally, it is obvious from comparison of the 1972 and 2008 publications with the 1943 manuscript that the 1972 publications closely (but not exactly) follow the sequence of text in the 1943 manuscript in the Smithsonian Institution Archives whereas the 2008 publication does not. We cannot now determine why the sequence of subfamilies, genera, and species variously differs among these three sources; perhaps the Cuban copy of the manuscript was mishandled and the sections ended up out of original order.

Both the 1972 and 2008 publications include descriptions of a few new taxa that are not listed in the Smithsonian’s copy of the 1943 manuscript. Also, both of these papers contain modifications of the names of some of the new taxa introduced—spelling or grammatical corrections and in some cases use of a completely different name—

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1. They considered the 1972 and 1976 publications to be the first part of the 1943 manuscript and the section on the Microceraminae and Macroceraminae to be the second.



that are not present in the Smithsonian's copy of the 1943 manuscript. This suggests that someone, perhaps C. de la Torre or Jaume, had added the new taxa and made various other edits to the Cuban copy of the manuscript, because those new taxa and other corrections or edits were listed in both the 1972 and 2008 publications.

A summary of the new taxa described in the 1972 and 2008 publications is given below (note that our compilation for the former paper differs somewhat from that provided in the 1976 abstract by Jaume & A. de la Torre *in* C. de la Torre & Bartsch, 1976: 3):

	Subfamilies	Genera	Subgenera	Species	Subspecies
Jaume & A. de la Torre 1972	3	21	22	231	143
C. de la Torre & Bartsch 2008	1	1	3	89	36
Total	4	22	25	320	179

## Authorship and type material

In the previous section we detailed the convoluted publication history of the 1943–1944 manuscript by C. de la Torre & Bartsch—some parts were published in 1972 (and republished in 1976) and edited by Jaume & A. de la Torre; one section (also edited by Jaume & A. de la Torre) was written in 1980 but never published, at least in the sense of ICZN Code Article 8 (1999), and the entire manuscript was published anew in 2008 in a book edited by Carolina de la Torre.

This raises nomenclatural questions concerning the validity of the mimeographed descriptions in the *Circulares*; the authorship and dates of publication of the new taxa first described in the 1972 and 1980 articles versus those first described in the 2008 book; the validity of new species-level taxa that were initially described in the identification keys; and the delineation of type material for the new species-level taxa, including those initially described in the identification keys.

**Mimeographed publication in the *Circulares*.** Although the *Circulares* were mimeographed instead of typeset, this does not affect their validity under the International Code of Zoological Nomenclature (“ICZN Code”), published by the International Commission on Zoological Nomenclature (“ICZN”), since the criteria for availability simply depends on whether the description was printed on paper and made available to the scientific community. Article 8 of the 1964 edition of the ICZN Code—which applied at the time of the 1972 and 1980 publications—only required that the publication “(1) be reproduced by ink on paper by some method that assures numerous identical copies; (2) be issued for the purpose of scientific, public, permanent record; (3) be obtainable by purchase or free distribution; and (4) not be reproduced or distributed by a prohibited means.” (ICZN 1964: 7). Although that edition had a “recommendation” that “Zoologists are strongly urged not to use mimeographing, hectographing, or similar processes for a publication containing a new name or a statement affecting nomenclature,” this was not mandatory. Article 8 in the 1985 and 1999 editions of the ICZN Code used similar phrasing, along with a similar “recommendation” in the 1985 edition (but not the 1999 edition) that mimeographing not be used. Further, Article 8.4 of the 1999 edition of the ICZN Code specifically states that “mimeographing” is an acceptable means of publication for “a work produced before 1986.” Thus, the *Circulares* were and remain a valid publication for purposes of the ICZN Code.

However, the 1980 “article” does not qualify as a publication for nomenclatural purposes, since there is no evidence that it was “obtainable by purchase or free distribution,” and no evidence that it was actually distributed to any of the institutions that had previously received the *Circulares*, since none of those institutions also have the 1980 “article,” or, indeed, any issues of the *Circulares* subsequent to 1972. Although a Cuban colleague claimed, two decades after Jaume's death, that a copy had been sent to the *Zoological Record*, there is no evidence that this document was ever received in London. Therefore, we must conclude that the 1980 typescript, only known to exist in one copy in Habana, was not properly published under the ICZN Code.

**Authorship and dating of the new taxa.** The authorship of the new taxa that were first published in the 1972 papers must be attributed to C. de la Torre & Bartsch, not to Jaume & A. de la Torre. Article 50 of the 1964 edition of the ICZN Code states that the author(s) “of a scientific name is (are) the person (persons) who first publish(es) it in a way that satisfies the criteria of availability, unless it is clear from the contents of the publication that ... some other person (or persons) is alone responsible both for the name and the conditions that make it available.” Article

50(a) in the 1985 edition of the ICZN Code is similarly worded, and Article 50.1.1 of the 1999 edition of the ICZN Code states more precisely that: “However, if it is clear from the contents that some person other than an author of the work is alone responsible both for the name or act and for satisfying the criteria of availability other than actual publication, then that other person is the author of the name or act.” Thus, any ambiguity in the 1964 and 1985 editions of the ICZN Code has been removed by clarifying that some “other” person can be the author of a new taxon if that person(s) has (have) done everything necessary to describe the new taxon other than the actual publishing of the new taxon.

Under Article 21.3 of the 1999 edition of the ICZN Code, 1972 is the publication date for nearly all of the new taxa, not 1943, because “the earliest date on which the work is demonstrated to be in existence as a published work is to be adopted as the date of publication.” For those few taxa (principally in the Microceraminae and Macroceraminae) not included in the 1972 and 1976 publications, but first published in the 2008 book, then 2008 is the publication date under Article 21.3.

It is clear from inspection of the texts of the 1972 publications that these are modified copies of selected sections of the 1943 manuscript, with a few additional remarks. The new taxa, identification keys and references to type localities were taken, with a few exceptions, verbatim from that manuscript. As noted above, Jaime & A. de la Torre explicitly credited this work to C. de la Torre & Bartsch. Furthermore, we note that the 1972 paper contains a new subgenus and species named after Jaime, *Liocallonia (Jaumea) jaumei*, and the description refers to Jaime “in the second person” as the collector of the species: “The type ... was collected by Miguel L. Jaime ... [other specimens] in Dr. Carlos de la Torre’s collection and of Miguel L. Jaime” (C. de la Torre & Bartsch 1972e: 1612; C. de la Torre & Bartsch 1976: 87–88). This is consistent with treating the authorship as C. de la Torre & Bartsch, since if Jaime & A. de la Torre had considered themselves to be authors, they would have used alternative language (e.g., “The type ... was collected by one of us (Jaime)” and “specimens are in our (Jaime) collection and that of Dr. C. de la Torre, now housed in the Museo Felipe Poey.”), and certainly would not have described the new species after themselves. Indeed, there is no mention anywhere in the 1972 articles that the C. de la Torre collection had long since been transferred to the Museo Felipe Poey, Universidad de la Habana (Conde 1958; Taboada 1994), and no longer existed as a separate, private collection.

Carlos de la Torre donated hundreds of lots of mollusks to the Smithsonian Institution, including types for most of the urocoptid species-group taxa that he and Bartsch described. Torre’s widow donated additional specimens from his collection to the Smithsonian in the early 1950’s (Smithsonian Institution 1955: 15–16). A portion of the collection (ca. 5,000 lots) was also donated to the Museum of Comparative Zoology after C. de la Torre’s death (Conde 1958; Taboada 1994; Johnson 2006). However, the bulk of this collection was deposited in the Museo Felipe Poey, Universidad de la Habana (Aguayo 1950; Taboada 1994; Breure & González-Guillén 2010: 7). One of C. de la Torre’s sisters gave A. de la Torre a number of boxes containing specimens of Urocoptidae; those specimens may now be with the rest of A. de la Torre’s collection, which is housed (since the 1990’s) in the “Instituto de Geología y Paleontología” with the Mario Sánchez-Roig collection. One of us (AGG) understands that A. de la Torre also kept some of his urocoptid material in his personal residence. The bulk of Jaime’s collection was sold by him to the Museo “Jorge Ramón Cuevas,” Reserva de Biosfera Baconao, Santiago de Cuba (Taboada 1994); his son also donated specimens (after Jaime’s death) to the “Museo Nacional de Historia Natural” of Havana. Portions of Jaime’s collection are also in the “Instituto de Ecología y Sistemática” in Havana; the Museo de Ciencia “Tomás Romay,” BIOECO, Santiago de Cuba province; and possibly yet other museums in Cuba and in the United States (Perera 1994: 119; Breure & González-Guillén 2010: 7; Lauranzón-Meléndez *et al.* 2011). Therefore, in order to locate all the specimens cited from the Jaime collection in the C. de la Torre & Bartsch manuscript and papers, it may be necessary to examine a number of museum collections in both Cuba and the United States.

Also, in another 1980 paper published by Jaime, he attributed the genus *Arangocoptis*, first described in 1972, as follows: “‘T-B’ Jaime y A. Torre 1972 Circulares . . . pag 1586 y Ciencias . . . pag 63.” (Jaime 1980: 9). Since Jaime & A. de la Torre did not indicate the authorship of the new taxa in the 1972 and 1976 papers, this 1980 article confirms that Jaime viewed C. de la Torre & Bartsch (“T-B”) as the authors of the new taxa first published in 1972. For the same reasons, the new taxa that were first validated in the 2008 book (because they were not treated in the 1972 articles) must also be attributed to C. de la Torre & Bartsch, and not to Carolina de la Torre, who merely published their manuscript with a new introduction.

Thus, the new taxa must be attributed as follows: those first published in 1972 are “C. de la Torre & Bartsch, 1972,” with the citation in the bibliography indicating that these publications were edited by Jaime & A. de la

Torre. Similarly, those first published in the 2008 book should be attributed as “C. de la Torre & Bartsch, 2008,” with the citation in the bibliography indicating that this book was edited by Carolina de la Torre (to avoid any confusion with Carlos de la Torre, her name should be spelled out in full).

**Validity of the new species and subspecies that were initially described in the identification keys alone.**

The fact that almost all of the new species in the 1972 articles were only described in the identification keys, and were not accompanied by a fuller description, including type material, does not affect their validity, as long as the identification key included a differentiating description. Under Article 13.1.1 of the ICZN Code (1999), all new taxa published after 1930 must “be accompanied by a description or definition that states in words characters that are purported to differentiate the taxon,” or otherwise cite a prior published statement, or be a new replacement name. Somewhat surprisingly, the ICZN still does not require that new taxa be illustrated, as figures are merely recommended (ICZN Code [1999], General Recommendation B3: “Name-bearing type material should be illustrated (or a reference given to such illustration)”).

Each of the new taxa in the 1972 articles was accompanied by a description, albeit very cursory. For example, the subfamily *Johaniceraminae* was described thusly: “In this subfamily the radula is typically *Macroceramid* but the nuclear sculpture is *Microceramid*, that is, it is axially ribbed. The columella bears a weak fold. This is an interesting group combining characters that distinguish the other two subfamilies” (C. de la Torre & Bartsch 1972h: 1647). The description for the new genus *Johaniceramus* paraphrased the first sentence of the description of the subfamily and provided a more detailed description of the columella as compared with the columella in several other named genera (C. de la Torre & Bartsch 1972h: 1648). Although cursory and probably inadequate by modern taxonomic standards, these descriptions are sufficient under the ICZN Code in that they purport to differentiate the new taxa from other taxa in the *Urocoptidae* of the same rank.

For *Johaniceramus*, the identification key listed one previously described species, with three new subspecies. *J. longus lescaensis* was described as: “Shell cylindro-conic; axial ribs strong,” and was recorded from Paso de Lesca, Cubitas, Camagüey, which differentiated it from the nominal species which instead had “axial ribs fine,” and was reported from three other locations in the Camagüey province of Cuba (C. de la Torre & Bartsch 1972h: 1648–1649). Similarly, *J. longus santacruzensis* and *J. longus borjeensis* were also differentiated, and were reported from yet other locations in Camagüey. Thus, while the 1999 edition of the ICZN Code disfavors the use of identification keys for new taxa (General Recommendation B8: “Names should not be established in keys, tables, abstracts, footnotes or similar items subsidiary to the main text of the work”), the ICZN Code does not expressly prohibit their use for new taxa.

**Type material of the new species and subspecies.** The delineation of type material of the C. de la Torre & Bartsch species-level taxa is somewhat problematic. The 1972 papers included reference to specific type lots for only two of the new species-level taxa treated therein, both of which are type species of new genus-group taxa. For one of these species, the aforementioned *Liocallonia (Jaumea) jaumei*, the type material was listed as follows: “The type, U.S. Nat. Museum No. 537465, was collected by Miguel L. Jaume at . . . [location; size of a single specimen]. U.S.N. Mus. No. 537466 contains 9 topotypes from the same source. Parallel material in Dr. Carlos de la Torre’s collection, and of Miguel L. Jaume.” (C. de la Torre & Bartsch 1972e: 1612). USNM 537465, expressly stated to comprise a single specimen, is the holotype of this new species, pursuant to ICZN Code (1999) Article 73.1.1 (“If an author, when establishing a new nominal species-group taxon states in the original publication that one specimen, and only one, is the holotype, or ‘the type,’ . . . that specimen is the holotype fixed by original designation.”). Specific type material was also referenced for *Levistemma peculiaris* (C. de la Torre & Bartsch 1972c: 1572). USNM 537678, also expressly stated to comprise a single specimen, was identified as “the type,” and is the holotype pursuant to ICZN Code (1999) Article 73.1.1. USNM 537679 “contains 2 paratypes” (locality not specified) while USNM 537680 “contains another specimen” and USNM 537681 “contains 4 additional specimens” (the latter two lots are from other localities in the same province). The description also states that “Paratypes and specimens from the same locality are in the Dr. de la Torre collection, at Havana.” Since this description specifies the holotype and several paratypes (USNM 537679, along with an unspecified number of specimens in the C. de la Torre collection), the remaining specimens are excluded from the type series.

Some of the descriptions of the new species in the 1972 and 2008 publications also mention paratypes, but most only mention topotypes (specimens from the same locality as the holotype), or “parallel material.” Under Article 72.4.6 of the ICZN Code (1999), if the author specified either syntypes or holotype *and* paratypes, then the topotypes should be excluded from the type series even though they were mentioned in the original description.

However, if a holotype had to be inferred under Article 73.1.1, as for *L. (J.) jaumei*, *supra*, then under Article 72.4.5, “the other specimens of the type series are paratypes.” Thus, in those circumstances where the 1972 or 2008 publication refer to “the type” along with topotypes or “parallel material,” but did *not* specify paratypes or syntypes, then those topotypes or “parallel material” are part of the type series and become paratypes.

A more complicated problem is presented by those species-level taxa that were only described in the identification keys of the 1972 papers, without reference to any specific lots as type material, such as the three subspecies of *Johaniceramus longus* mentioned above. Since many of these taxa were more fully described and illustrated in the 2008 book, some researchers may be tempted to treat all the “types” in the 2008 book as automatically part of the type series. However, ICZN Code (1999) Article 72.4.1.1 states that, for species-level taxa first established before 2000, “any evidence, published or unpublished, may be taken into account to determine what specimens constitute the type series.” We conclude that the best “evidence” of the type series for the 1972 taxa whose descriptions did not cite any specific lots is the 1943 manuscript, which does have specific reference to type lots. In the 1943 manuscript, in most instances, a single “type” was listed, along with topotypes or “additional material.” Thus, the treatment of the “types” in the 2008 book for those taxa first validated in 1972 has no bearing on the type material of these taxa, although it should be noted that the 2008 book lists, with a few exceptions, the *same* specimens as in the 1943 manuscript, and hence were available to C. de la Torre and Bartsch at the time that they prepared the 1943 manuscript (ICZN Code [1999] Article 72.4.1.1 recognizes that specimens where “there is evidence that they were known to the [original describer] and recognized by him as [belonging to his new species] when the nominal species was established).

Note that the type material cited in the 1943 manuscript has to be treated as syntypes, regardless of the holotype and paratype designations in that document, because these types were not fixed in the original (1972) publication (ICZN Code [1999] Article 73.2). Further, with respect to the 1972 taxa, the citations in the 2008 book of some lots as “the type” or the “holotype,” do not constitute valid lectotype selections, since ICZN Code (1999) Article 74.7 requires that all lectotype designations made after 1999 must expressly use the term “lectotype,” or an exact translation.

Therefore, although we realize that this may cause some initial difficulties in curating the type material, it will be necessary for researchers and museum curatorial staff to consult both the published description and the 1943 manuscript when determining the type series for those new taxa that were described in the 1972 publications without specification of the type material. We note that Torre-Callejas & González-Guillén (1997: 35) stated that “It is necessary to point out that all of the holotypes of the taxa described by C. de la Torre and P. Bartsch have been preserved at the Department of Mollusks, National Museum of [Natural History], Washington, D.C., U.S.A. There are also paratypes of the different species at the Museo Poey at the University of Havana in Cuba.” However, this across-the-board differentiation of holotypes versus paratypes is insufficient under the ICZN Code (1999), which instead requires a species-by-species specification of the holotype and the paratype(s) for each species.

For the species-group taxa that were first described in the 2008 book, primarily in *Microceramus* and *Pineria* (Microceraminae), and *Macroceramus* (Macroceraminae), the type material is that set forth in the 2008 book, which corresponds in large part with the information in the 1943 manuscript. For some taxa in those three genera, the holotype was stated to be in the “U.S.N.M.” but a specific catalog number was not given. However, the name of the collector, locality, and specimen size were usually given, and consequently the primary types for almost all of these taxa have been located in this collection.

In order to assist other researchers and museum curators with determining the type material and its status, we have scanned the Smithsonian’s copy of the 1943 manuscript and anticipate making it available online in a readily accessible format.

Subsequent citations to the Cuban Urocoptidae described by C. de la Torre & Bartsch

Although it is beyond the scope of this paper to analyze the biological validity of the numerous new taxa of Urocoptidae described by C. de la Torre & Bartsch (which will require significant research in the field and the laboratory), we are able to summarize the relatively limited literature that has discussed these taxa, and the conclusions reached as to their status.

As far as we have been able to determine, the only subsequent paper published outside of Cuba that cited the 1980 typescript on the Macroceraminae and Microceraminae was a bibliographic catalog of publications on Cuban terrestrial malacology, and that was only within a list of numerous other titles (Breure & González Guillén 2010:



23). Fernandez & Franke (2008, 2010), in Internet-only articles, also cited the 1980 paper. However, none of these publications provide any evidence that the 1980 typescript was properly published and made available in multiple copies, as required under the ICZN Code (1999).

The 1972 papers were indexed in the *Zoological Record*, which listed them as co-authored by Jaume & A. de la Torre (*Zoological Record* 1978: 51), but all of the new taxa were attributed solely to Jaume (*Zoological Record* 1978: 335–348). The 1976 paper was indexed in the *Zoological Record*, but with a note stating that it was a republication of the 1972 papers, thus no new taxa were recorded from the 1976 paper (*Zoological Record* 1980: 48). As noted above, the 1980 typescript was never indexed by the *Zoological Record*. The 2008 book was first indexed by the *Zoological Record* sometime in early 2012, with the authorship in the online version listed as “de la Torre y Huerta, Carlos; Bartsch, Paul; Ocampo, Denise,” but the new taxa have not been separately indexed as of 14 May 2012. While Denise Ocampo edited the text of the 2008 book she should not be credited with the authorship of the volume or the new taxa.

Mesa & Jaume (1982a, b), in their summary of the Cuban Urocoptidae, cited the 1972 papers and some of the new genus-level groups described therein, although they attributed one of these taxa, *Liocallonia* (*Jaumea*), to “Torre & Bartsch” Jaume & Torre, 1972.

Paul (1983), in a study of the anatomy and systematics of Jamaican Urocoptidae, cited the 1976 paper and the subfamilies described therein and suggested several changes to the scope and content of these taxa.

Boyko & Rosenberg (1999: 47) correctly cited the 1976 paper as a reprint of the 1972 papers.

Schileyko (1999: 369), in his analysis of the higher-level phylogeny of the terrestrial pulmonates, synonymized the Macroceraminae Jaume & A. de la Torre, 1972, and Johaniceraminae Jaume & A. de la Torre, 1972 with the Microceraminae Pilsbry, 1904.

The comprehensive catalog of taxa in the Urocoptidae by Richardson (1991) lists the taxa described in the 1972 papers, but not those that were covered by the 1980 typescript. Richardson attributed the taxa to “Jaume & Torre, 1972.”

Espinosa & Ortea (1999), in their catalog of the terrestrial molluscs of Cuba, listed the taxa described in the 1972 papers, but attributed these to Jaume & A. de la Torre (1976).

The 1972 papers were also cited by Bouchet & Rocroi (2005) in their comprehensive nomenclator of gastropod family names. Bouchet & Rocroi (2005: 266) listed seven subfamilies for the Urocoptidae and synonymized—after Schileyko—both Johaniceraminae “Jaume & de la Torre, 1972” and Macroceraminae “Jaume & Torre, 1972” with the Microceraminae Pilsbry, 1904. As set forth in the previous section, the authorship of Johaniceraminae and Macroceraminae should be attributed to “C. de la Torre & Bartsch, 1972,” not to Jaume & A. de la Torre. Bouchet & Rocroi (2005: 38, 170) also noted that two other subfamilies, which were described as new in the 1972 papers, and again in the 2008 book, were actually first described by other authors—Brachypodellinae was first established by Baker (1956: 130); Tetrentodoninae was first established by Bartsch (1943: 31).

Oliva-Olivera & Real (2009: 594–595), in their catalog of terrestrial gastropods from Pinar del Río, recorded 34 species of Urocoptidae, but they erroneously attributed the new taxa first described in 1972 to “Jaume & Torre, 1976.”

Lauranzón-Meléndez (2011), in their discussion of paratypes now housed in Museo de Historia Natural “Tomás Romay,” Centro Oriental de Ecosistemas y Biodiversidad (BIOECO), Santiago de Cuba, attributed all the urocoptid taxa to “Torre & Bartsch, 2008,” including those first described in 1972.

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